Title: INTEGRATED ELECTROMAGNETIC INTERFERENCE FILTERS AND FEEDTHROUGHS

REMARKS

This responds to the Final Office Action dated September 25, 2007. Claim 1 is amended. Claims 1 – 26 remain pending in this application.

Information Disclosure Statement

Applicant submitted an Information Disclosure Statement and a 1449 Form on December 13, 2004 and a Supplemental Information Disclosure Statement and a 1449 Form on April 21, 2006. Applicant respectfully requests that initialed copies of the 1449 forms be returned to Applicants' Representatives to indicate that the cited references have been considered by the Examiner.

\$102 Rejection of the Claims

Claims 1-6, 8-12, 15-18 and 23-26 were rejected under 35 U.S.C. § 102(e) for anticipation by Kim (U.S. Patent No. 6,778,040). Applicant respectfully traverses. Claim 1 has been amended to more clearly describe the recited subject matter. The Office Action fails to establish a proper prima facie case of anticipation because Kim does not teach some of the elements presently recited in the claims.

Applicant cannot find in Kim any disclosure of, among other things, one or more ceramic chip capacitors mounted on the printed circuit interconnect

substrate to face inward into the hermetically sealed interior of the hermetically sealed metal case.

as presently recited in claim 1.

The Office Action states, under "Response to Arguments," that in Kim "the capacitors are faced inward into the seal interior of the seal (60)." Applicant respectfully traverses. Instead, Kim describes placing filter devices, such as capacitors, on the top surface that is outside a sealed housing. Kim states that "additional pattern lines are formed on the top surface of the insulating substrate 40 so as to allow filter devices to be mounted." Kim also refers to

¹ Kim. col. 7 lines 38-40.

hermetically sealed metal case, as recited in claim 1.

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"assigning a shielding function to a bottom surface on which filter devices are not mounted."2 Kim further cites U.S. Pat. No. 5,959,829 (the '829 patent) for construction of a feed-through filter.³ The '829 patent states that an important aspect of the invention is the location of the chip capacitors 42 directly at the point of lead penetration of the header of the implantable device, and that the efficacy of the chip capacitor filter ... is based upon the attenuation of the RF carrier before it can enter into the sealed housing for the electronic circuitry." Thus, Kim with the '829 patent relates to placing filter devices, such as capacitors, on the top surface that is outside a sealed housing, thereby teaching away from one or more ceramic chip capacitors mounted on the printed circuit interconnect substrate to face inward into the hermetically sealed interior of the

The Office Action states, under "Response to Arguments," that in Kim, the capacitors (C1, C2) are covered inside by the seal 60 mounted on the substrate (40), and thus, the capacitors being formed are faced inward into the seal interior of the seal (60).5 However, Kim states that silicon resin⁶ can be used as the buffer 60. Claim 1 recites one or more ceramic chip canacitors mounted on the printed circuit interconnect substrate to face inward into the hermetically sealed interior of the hermetically sealed metal case. Applicant cannot find in Kim that C1, C2 are in a hermetically sealed interior of the hermetically sealed metal case because Kim does not describe the resin as being a barrier to body fluids.

Moreover, even if the resin were to have such properties, Kim with the '829 patent would relate to placing filter devices, such as capacitors, within resin on the top surface that is outside a sealed housing, and would not teach capacitors mounted ... to face inward into the hermetically sealed interior of the hermetically sealed metal case, as recited in claim 1.

Applicant respectfully requests withdrawal of the rejection and reconsideration and allowance of claims 1-6, 8-12, 15-18 and 23-26.

² Kim, col. 1 lines 11-12.

³ Kim., col. 2 lines 7-8.

^{4 &#}x27;829 patent, col. 7 lines 34-41.

⁵ Office Action, pg. 6.

Applicant believes the drafter of the Kim patent meant to refer to silicone resin.

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§103 Rejection of the Claims

 Claims 19-22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim (U.S. Patent No. 6,778,040) in view of Brendel et al. (U.S. Patent No. 6,529,103). Applicant respectfully traverses.

Claims 19-22 ultimately depend on base claim 1. As discussed above, Applicant believes claim 1 to be allowable at least for the reason that Kim does not teach or suggest all of the elements recited in the claim. The addition of Brendel fails to disclose the missing elements.

Also, Kim teaches away from the claimed invention. The '829 patent, cited in Kim as disclosing construction of a feed-through filter in detail, states that an important aspect of the invention is the location of the chip capacitors 42 directly at the point of lead penetration of the header of the implantable device, and that the efficacy of the chip capacitor filter ... is based upon the attenuation of the RF carrier before it can enter into the sealed housing for the electronic circuitry." Thus, the '829 patent describes placing the chip capacitor filter outside a sealed housing to attenuate the RF carrier.

Further, Kim states that a chip capacitor mounting circuit for an EMI filtering function is implemented on the top surface of the insulating resin substrate. Kim also states that "it is difficult to assign a shielding function to the top surface of the insulating substrate 40," and "in consideration of this difficulty, the bottom surface ground part 44 for electromagnetic shielding is implemented on the bottom surface of the insulting substrate 40."

Therefore Kim, with the '829 patent, teaches away from chip capacitors mounted on the printed circuit interconnect substrate to face inward into the hermetically sealed interior, as recited in claim 1 and incorporated into claims 19-22.

Applicant respectfully requests reconsideration and allowance of claims 19-22.

Claims 13-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim
 (U.S. Patent No. 6,778,040) in view of Andresakis et al. (U.S. Patent No. 6,657,849). Applicant respectfully traverses the rejection.

Claims 13-14 depend on base claim 1. As discussed above, Applicant believes claim 1 to be allowable at least for the reason that Kim does not teach or suggest all of the elements recited

^{7 &#}x27;829 patent, col. 7 lines 34-41.

⁸ Kim. col. 11 lines 14-16.

⁹ Kim, col. 7 lines 40-47.

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in the claim. The addition of Andresakis et al. fails to disclose the missing elements.

Additionally, as discussed above, Kim teaches away from the subject matter recited or incorporated into the claims. Applicant respectfully requests reconsideration and allowance of claims 13-14.

 Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim (U.S. Patent No. 6,778,040) in view of Chee (U.S. Patent No. 6,657,133). Applicant respectfully traverses the rejection.

Claim 7 depends on base claim 1. As discussed above, Applicant believes claim 1 to be allowable at least for the reason that Kim does not teach or suggest some of the elements recited in the claim. The addition of Chee fails to provide the missing elements. Additionally, as discussed above, Kim teaches away from the subject matter recited in the claims. Applicant respectfully requests reconsideration and allowance of claim 7.

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CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 371-2172 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date Oct. 29,2007

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop RCE, Commissioner of Patents, P.O. Bert-1450, Alexandria, VA 22313-1450 on this 2dd day of October 2007.

NICON JOHN

Name

Signature

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